PRESQUILE NATIONAL WILDLIFE REFUGE NARRATIVE REPORT FOR CALENDAR YEAR 1965

PERSONNEL

REFUGE	MANAGE	R
REFUGE	AID	
MAINTEN	ANCEMAI	Ĭ
CLERK-T	YPIST	(INTERMITTENT)

EARL R. CUNNINGHAM	(1)
JAMES J. PARLOW	(2)
RAYMOND P. MCFARLAND	(3)
IRENE S. LIPCHAK	())

- (1) E.O.D. OCTOBER 25, 1965, REPLACING JAMES H. ROBERTS(2) RESIGNED OCTOBER 21, 1965
- (3) PROMOTED TO GS-5, BIOLOGICAL TECHNICIAN, DECEMBER 5, 1965

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I. GENERAL

A. Weather Conditions

The data in the following table were provided by the Old Dominion Water Company in Hopewell, Virginia and are applicable to Presquile Refuge.

Pred	cipitation	(In inches	s-includes snow melt)	Temper	rature
	1965	Normal	Snow (Inches)	Max.	Min.
January February March April May June July August September October November December	1.70 1.89 4.25 2.07 .85 4.40 3.56 1.34 2.06 1.12 .51	3.64 2.75 3.42 3.23 4.01 4.41 3.23 3.23 3.57 2.55 2.02 3.50	15.2 5.5	70 74 73 86 95 96 98 90 81 79	8 20 26 45 46 54 47 47 27 19 18
Totals	24.35	41.01	20.7		

The year 1965 was categorically dry with only 24.35 inches of precipitation recorded as compared with the normal 41.01 inches. This deficiency of 16.66 inches has resulted in marked drought conditions throughout the latter half of the year.

January, February, and March were relatively mild months. Although more than 20 inches of snow fell, consistently warm afternoon temperatures usually melted it rather soon.

April was colder than usual and spring was some three weeks late in making its debut.

May and June were mild and dry but July brought much needed precipitation with normal temperatures.

The fall was balmy and mild throughout December but extremely dry.

B. Habitat Conditions

1. Water

The normal water levels in the James River have been consistently six to ten inches lower than normal throughout the latter half of the year. Strong east and south-east winds however, cause the tides to fluctuate as much as a foot. So although the water has been low, the influence of intermittent east and south-east winds has provided ample flooding of the north and east marshes to permit good growth of aquatics.

The impeded flow of fresh water has, however, permitted the influx of salt water and as a result, the content of salt in the James at Hopewell has almost doubled since last year.

The following table bears this out.

Parts	NACL	per	mi	llio	n	par	ts	H ₂ 0	
(Each	entry	re	pre	sent	S	the	hi	gh	reading
		f	or	the	re	spe	cti	ve	month)

Month	1964	1965
January	6	8
February	3	8
March	9	10
April	14	14
May	12	16
June	13	20
July	18	24
August	18	28
September	18	32
October	13	42
November	12	40
December	12	42

2. Food and Cover

In spite of the drought, refuge crops have been fair to good. Buck-wheat made good seed heads but it was practically dried up before the waterfowl arrived. Corn was slow starting but a few late summer rains enabled it to grow out successfully into an excellent stand. Winter wheat got off to a good start, but the fall drought has brought its growth to a dead stop. Heavy goose utilization and the drought left the browse in poor condition as of the year end.

A "no corn manipulation" experiment has been in progress here since 1961. Geese utilized the standing corn very little until 1963 when some 24% of the crop was taken - the utilization evidenced mainly in hybrid dwarf strains. In 1964, all of 30 acres of dwarf corn was 50% utilized. Thus far utilization of the 1965 corn has been negligible.

This fact is significant since no dwarf corn was planted this year. If snow and deterioration do not bend and/or lower the tall stalks, it may well be that sufficient utlilzation of standing tall corn will not materialize.

The mast crop of water tupelo (Nyssa aquatica) is tremendous. While no duck crops have been examined to determine it, from the feeding habitat used by wood ducks, blacks and mallards in the wooded areas, it is almost certain that the tupelo is being taken to great extent.

II. WILDLIFE

A. Migratory Birds

Canada geese numbers are much the same as they have been for years with peaks ranging from 8000 to 9000. The bulk of the flock left the area in late March and early April and returned in late September, throughout October and peaked in November at 8600 birds. Some 120 Blues and 25 Snows are among the flock.

Duck numbers are down from last year some 25%. No explanation is offered for the variation in populations other than the scope of the reporting area. Thus far this winter only those ducks using the refuge and the immediate areas have been reported.

During the spring and summer twelve broods totaling some 60 young wood ducks were observed. Some 100 black ducks and an equal number of mallards were observed in July and August. None of the birds were handled but because of their appearance it was assumed that they were local birds. However, no nests were observed to substantiate the assumption.

During late spring and early summer more than 2000 mourning doves were reported on the refuge; of these nearly 600 were banded. Nesting was common, particularly in the spoils bank area.

At least 200 snipe frequent the east and north marshes in late winter each year.

B. Upland Game Birds

A static population of some 12 turkeys remains on the island. A flock of eight was observed on several occasions in the farm area and a small group of four to six were sighted regularly in the woods area near the mouth of Little Creek. The sex ratio appears to be about three males to two females.

At least three covies of bob-white quail are resident on the area. Lately they have been observed flying across the main channel of the James River, indicating that from time to time other covies may frequent the island.

C. Big Game Animals

Deer have reached the saturation point. One early evening count in late December revealed 125 animals in the farm area alone. Were it not for the refuge corn crop they would be forced to leave the island or face starvation, the latter alternative being more probable.

The fence which was erected to exclude the deer from the farm area is completely ineffective. The deer continually push holes in it and concentrate inside the fence. Then too, some five to eight animals become entangled in the fence annually. In total scope the fence does more harm than good and should be removed.

D. Fur Animals, Predators, Rodents and Other Mammals

The raccoon population is increasing rapidly. They are a definite hinderance to duck trapping, destroying many birds in the traps annually. It is probable that raccoons are also a significant limiting factor in wood duck production on the refuge.

E. Hawks, Owls, Eagles, Crows, etc.

Red tailed, red-shouldered, and marsh hawks have been observed regularly on the area. At least two sparrow hawks are present as of this writing.

At least four bald eagles, of which two are adults, have frequented the refuge during the winter periods. A nest has been located on the Shirley Plantation some five miles distant from the refuge. The status of the nest is unknown, but a local Audubon member has recently observed an adult bird sitting on the side of the nest on two occasions.

From their evening calls and occasional observations, it appears that the refuge is carrying nominal populations of great horned and barred owls.

Some 50 to 150 crows were present throughout the year.

F. Other Birds

During October and early November some 20,000 blackbirds frequented the refuge. The assortment was complete with redwings, purple grackles, starlings, and cow-birds.

G. Fish

Hot weather fish kills were evident again this year. The state Game and Fish Commission officials attribute the die-offs to an oxygen deficiency resulting from industrial pollution.

H. Reptiles

Except for various species of water-snakes, the refuge has no significant numbers of snakes.

I. Disease

Nothing to report.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development

The most significant accomplishments of the year are as follows:

- 1. Pilings at the mainland ferry landing were replaced.
- 2. Quarters #1 was dismantled and removed.
- Quarters #3 received interior paint throughout and a new heat system was installed.
- 4. Drain pipe was installed along the main road from the ferry landing to the crest of the rise.
- 5. Ferry slips were cleaned.
- 6. The ferry cable was exchanged three times.
- 7. The interior of the shop was sealed.

B. Plantings

1. Aquatics and Marsh Plants.

None.

2. Trees and Shrubs

None.

3. Upland Herbaceous Plants

None.

4. Cultivated Crops

Cultivated crops include 70 acres of Funk's G-72 Hybrid corn, 18 acres of Japanese Buckwheat, 80 acres of winter wheat, and 25 acres of common ryegrass. Ladino clover and Kentucky 31 fescue were over seeded on 35 acres of the spoils bank permanent pasture. Because of

the prevalent drought conditions neither the ryegrass, fescue, or clover made any significant growth.

C. Collections and Receipts

1. Seeds and Other Propagules

These quantities of seeds were purchased for refuge planting during the year:

Funk G-72 hybrid seed corn	12	bushels
Japanese Buckwheat	1200	lbs.
Annual Ryegrass	1250	11
Kentucky 31 Fescue	500	11
Ladino Clover	100	II

Three hundred five bushels of wheat were harvested on the refuge for planting winter browse.

D. Control of Vegetation

Mechanical control of Jimson weed and Johnson grass was attempted by periodic disking. The only chemical control executed was the treatment of 40 acres of corn with three lbs. of 80% commercial atrazine per acre. The cost was just over \$9.00 per acre and the treatment was 90% effective in control of Jimson weed and Johnson grass.

E. Planned Burning

None.

F. Fires

None.

IV. RESOURCE MANAGEMENT

A. Grazing

None.

B. Haying

None.

C. Fur Harvest

None.

D. Timber Removal

None.

E. Commercial Fishing

Several small individual commercial fisherman operate in the closed area of the James River around the refuge. Their operations are small and are primarily basket fishing for carp and catfish. No data are available as to the quantities of fish they take, but it is known that one of their markets is the fish pond stocking business.

F. Other Uses

Nothing to report.

V. FIELD INVESTIGATION AND APPLIED RESEARCH

A. Progress Report

Duck banding was suspended during December of 1964 and according to an administrative directive no banding was done prior to the close of the 1965 hunting season. Therefore, no ducks were banded at Presquile during the 1965 calendar year.

Canada geese were reluctant to go on the net sites so banding success for 1965 was far below 1964 with only 119 birds banded.

Refuge personnel banded 416 mourning doves and Agent Bain banded almost 200 on the refuge to bring the total doves banded in 1965 to about 600.

VI. PUBLIC RELATIONS

A. Recreational Use

Because of the access problem, Presquile's recreational use by the public is limited. Fishing, skiing, and boating around the island within the administratively closed area are permitted and many use days are noted although no data are available to indicate the extent of the usage.

Actual participation in recreational uses on the refuge proper were limited to tours and nature study. During the year five scout groups and one church group were given a tour of the refuge. More than 200 youngsters with their adult leaders saw waterfowl, deer, skunks, and wild turkeys, song birds - however, it seems that more enthusiasm was mustered for mammal bones and driftwood than for wildlife.

B. Refuge Visitors

Presquile had 16 official visitors in 1965:

2-9-65	Messrs. Art Hughlett Gene Crawford John Sincock Royston Rudolph	Survey Team Minneapolis " " Washington " " Patuxent Asst. Regional Atlanta Supervisor	Inspection " " " "
4-12-65	Mr. Robert Bain Mr. Warren Lupton	G.M.A. Richmond, Va., G.M.A. Atlanta, Georgia	Cooperation Cooperation
5-11-65	Messrs. Howard MacCord Ed Heite	Archeological Society, Richmond, Va.,	Research
6-3-65	Messrs. David Hall William R. Kensinger	Asst. Ref.Mgr. Chincoteague NWR G.M.A. Maryland	Orientation
10-23-65	Mr. Joe Bellamy	Game Warden, Va.,	Cooperation
10-25-65	Mr. Don Hankla	R.O. Atlanta	Inspection
11-8-65	Mr. Ross McKinsey	Richmond News Leader	News article
11-9-65	Mr. Bill Good	Pea Island NWR Manteo, N.C.	Equipment Transfer
12-10-65	Mr. Don Pfitzer	R.O. Atlanta	Orientation
12-28-65	Mr. John Fields	Asst. Ref. MgrBack Bay	н

C. Refuge Participation

Participation by refuge personnel in civic and conservation affairs has been rather limited this year. Only four talks were made and one film shown. At least four contacts were made with area news media relative to refuge operations; however, only two articles were published.

D. Hunting

Deer hunting around the refuge was relatively insignificant and deer hounds swam onto the refuge only on two occasions.

Waterfowl hunting has been widespread throughout the area. There has not been opportunity to do a thorough investigation of hunter success but the results of the Varina Sportsmens Club (Curles Neck Marsh) are known and are indicative of the hunting activities in this general area. The goose kill this year was lll as compared with 199 in 1964 and 300 in 1963. The decline in numbers bagged is due primarily to the technique of hunting. Until this year the hunters would line up along the river bank and shoot the birds as they crossed a narrow neck of woods between Curles Neck marsh and the river. In this type of hunting much "sky busting" was done and many birds were crippled down only to be taken by predators. At least 30 were known lost each year from this club alone. We are pleased to report that this method of hunting is no longer employed and as a result, only two birds were known to have fallen in the river.

Duck kills were also down somewhat, approximately 40%. Most of the hunters contacted attribute the decline in birds bagged to the weather. Inclement weather, apparently preferred by the hunters, was not experienced throughout the duck season. Best reports indicate that species composition of birds bagged was: black 60%, mallard 20%, with widgeon, pintails, and green winged teal comprising the majority of the other 20%.

E. Violations

Military helicopters from the Naval Air Station at Norfolk, Virginia, and small aircraft from Richmond, Virginia airports made several harassing passes at waterfowl at various times throughout the year. Letters to the proper authorities seem to have solved the problem.

No formal cases were made by refuge personnel during the year.

F. Safety

Only seven formal safety meetings were held during the year. During much of the year (and particularly those months during which no formal meetings were held) only two male employees were on official duty status and safety aspects were discussed as they were encountered.

During the year some 5,184 accident free employee hours were worked. This brings the total hours worked without a lost time accident to 60,400.

A. Items of Interest

Former manager James Roberts departed this station on October 28th. The present manager E.O.D. on October 25 and will, during January 1966, transfer to Yazoo N W R. The new manager, John Fields, will E.O.D. January 26. Presquile will then have been host to three managers withing a period of three months.

B. Photographs

Presquile is in dire need of good photographic equipment. The only camera here was in repair twice during the year. Subsequently not many pictures were taken during the first three quarters of the year.

C. Signature

Submitted By:

Earl R. Cunningham

Refuge Manager

Dated January 25, 1966

Approved by:

Regional Office

Acting Regional Supervisor

FEB 18 1966

"Some came running"



... some came by water,



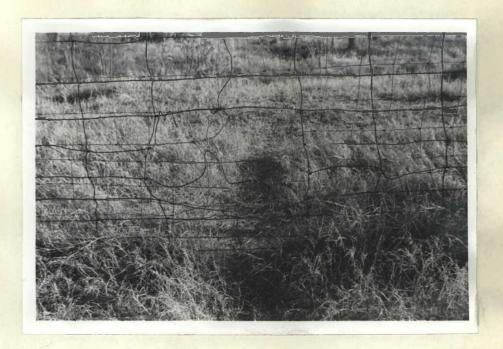


... some take the overland trail

...still others go the marsh trail...



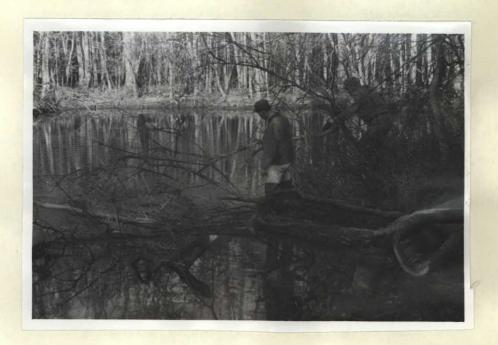
but one thing is certain - at the end of every trail, there's a hole in the "deer" fence that leads to the refuge corn crop.



Eastern red cedar is another favorite of the Presquile deer. There's hardly a cedar on the island that doesn't vividly exhibit a browse line.



Little creek is clogged with a profusion of trees and stumps which have fallen in the creek after the soil was eroded away from their roots by tidal action. Here, the creek is being cleared of these trees.



Replacing the ferry cable. This is a "three times a year" job costing more than \$1000 annually.





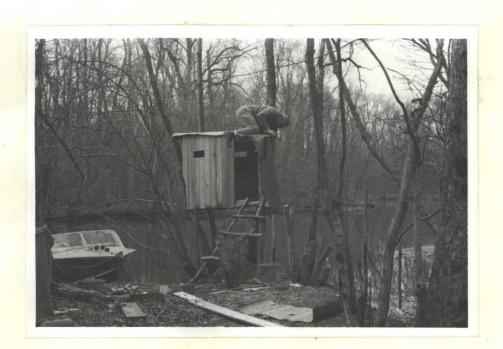
Three large duck traps were constructed during November - December. Here, Maintenanceman McFarland and laborer position posts for leads to traps.



Except for a funnel, this trap is ready for post-season duck trapping.



This observation blind is one of four erected for photographing waterfowl.

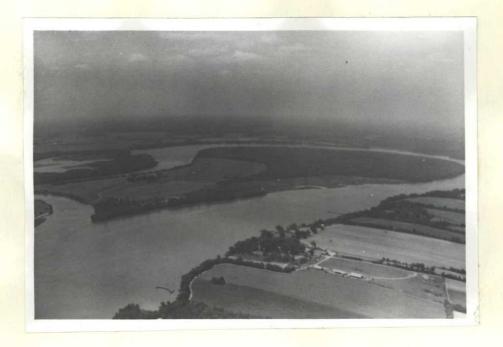


The Appomattox River bridge, just north of Hopewell on route #10 is a draw bridge, and traffic (enroute to refuge from Hopewell offic) frequently is tied up for extensive periods.



A new bridge now under construction (scheduled for completion in 1966) will alleviate this problem.





An aerial view of Presquile Island. The origin of this photograph is not known - it was copied from an original in the refuge office. The quality of the copy is poor, but it depicts the farm area (left center), the east marsh (right center) the hardwood swamp (northern 2/3 of the island) and Curles Neck marsh immediately across the river in the extreme left center. Curles Neck marsh, although in private ownership, provides an invaluable supplement to Presquile's waterfowl habitat.

3-1750 Form NR-1 (Rev. March 1953)

WATERFOWL

EFUGE Presquile 1	W R					HONTHS	OF January	10	April	, 19_0	
	: (2) : Weeks of reporting period										
_/	:	:	:	8	:	:	:	:	:	:	
	: 1	: 2	: 3	: 4	: 5	: 6	: 7	: 8	: 9	: 10	
wans:	1		1	-							
Whistling											
Trumpeter											
eese:					(0.00	(000	5000	5000	2500	2500	
Canada	8000	7000	7000	7000	6000	6000	5000	5000	3500	3500	
Cackling											
Brant											
White-fronted											
Snow	15	15	15	15	15	15	15				
Blue	90	90	90	75	75	50	25				
Other											
ucks:											
Mallard	4000	4000	2500	1500	1500	1000	500	500	300	300	
Black	3500	3500	2000	2000	2000	2000	1500	500	500	500	
Gadwall	20										
Baldpate	6										
Pintail	1500	1500	2000	1000	1000	200	500	1000	400	500	
Green-winged teal									100		
Blue-winged teal								4			
Cinnamon teal											
Shoveler	29										
Wood	30.0	300	500	300	300	100	100	100	100	100	
Redhead	100	10,0									
Ring-necked											
Canvasback							1				
Scaup				1							
Goldeneye	-								-		
Bufflehead	-		+		-			1	1		
Ruddy	25	25	25	50	50	-			20		
Other	65	45	47	70	70	-					
Hooded Merganser	4			-		+			+		
	1	1225	125	200	200	200	200	200	100	200	
Common	135	135	135	200	200						
COOT	300				CONT.						

3-1750a Cont. NR-1 (Rev. March 1953)

WATERFOWL (Continuation Sheet)

REFUGE Presquile N	IWR					MONTHS O	F Janua	ry	TO April		
		Veeks	ofre	(2) port	ingp	eriod			: (3) ':Estimated	: Prodi	
(1) Species	11	1 2	13	14 *	: : 15	16		18	:waterfowl :days use		
Swans: Whistling					Tigar						
Trumpeter Geose: Canada		0000							450,100		
Cackling Brent	4000	2000	300		*				4,00,100		
White-fronted Snow						al Santa	ta Solven		735		nate (
Blue Other									3,465		nasvi (s
Ducks: Mallard	500				- w % Lb	tod sautes	average	Lodar 1	116,193	ni alib	Rept
Black Gadwall	200				in each	r exchant	mon v lais	No especialis	127,435 140	aW barna Umal	t) Esub Days
Baldpate Pintail	300				1 no fo	ece summere.	o redimun	bacomi	69,300	anolde	Dood: (
Green-winged teal Blue-winged teal Cinnamon teal				abso sd absolo	E. Committee of	end round Retrientes	g .asam tation		700		
Shoveler Wood	700				(8) 1000	habanga	r szsi lo	Y*CEMINGS	203	Dug n L	mar (s
Redhead Ring-necked	100		op yn beddy	al Library	Impant	Obertowl	io redy	en mumb	16,093	, redaurk	HEST (I
Canvasback Scaup					(4) rabo	echnded u	ef data i	Y CEMPUL	a Laobi	Subcos	EUQ" · (C
Goldeneye Bufflehead	200								1,540		
Ruddy Other Hooded Merganser common	100								1,540 1,932		
Coot:	200								13,321 2,100		
					(Over)						

	(5) Total Days Use : I	(6) (7) Peak Number: Total roduction	SUMMARY	-1750s ant. NR-1
Swans	:	(# (#)	Principal feeding areas Refuge fields, mud f	lats, marsh
Gees	454.300 LANGE.	8,105 TO EMINON	and swamp areas and adjacent private fields	, marshes and
Ducks	49.559	9.519 :	Principal nesting areas 1000 acres tidal man	sh and hardwood
Coots	2,100	300 :	swamp.	(1)
			Reported by	rades
			James H. Rober	rts nedegment
	INSTR	UCTIONS (See Secs. 7531 through	7534, Wildlife Refuges Field Manual)	
(1)	Species		ed on form, other species occurring on refuge ded in appropriate spaces. Special attention national significance.	
(2)	Weeks of Reporting Period:	Estimated average refuge popul	Lations.	
(3)	Estimated Waterfowl Days Use:	Average weekly populations x r	number of days present for each species.	
(4)	Production: (,	breeding areas. Brood counts	duced based on observations and actual counts should be made on two or more areas aggregat naving no basis in fact should be omitted.	on representative ing 10% of the
(5)	Total Days Use:	A summary of data recorded und	der (3).	
(6)	Peak Number:	Maximum number of waterfowl pr	resent on refuge during any census of reporti	ng period.
(7)	Total Production:	A summary of data recorded und	ler (4).	it itema
-	1, 232			*
	23			1

WATERFOWL

*					(2)						
1		Weeks of reporting period									
(1)			:	:	: 5	4		:	:	:	
Species :	1 :	2	: 3	: 4	* 5	: 6 :	7	8	: 9	: 10	
Whistling											
Trumpeter											
eese:			-		-	+					
Canada	1					1 3 3 4 5				}	
Cackling			-	-							
Brant			-		-						
White-fronted											
Snow											
Blue											
Other											
acks:											
Mallard											
Black											
Gadwall											
Baldpate											
Pintail											
Green-winged teal											
Blue-winged teal											
Cinnamon teal								1			
Shoveler							100	100	100	100	
Wood	50	50	50	50	50	50	100	100	100	100	
Redhead								-			
Ring-necked								-			
Canvasback		-	-					-			
Scaup								-			
Goldeneye Bufflehead			-						-		
					-					-	
Ruddy Other					-		-	-			
O MIET.			+			+			-	-	
	1	1	1		1		10				

WATERFOWL (Continuation Sheet)

REFUGE				.erois		MONTHS C	May May		TO Augus	t	_, 19_65
Presquile i		leeks	of r	(2) eport	ing p	eriod	I s		(3) Estimated	Produ	action
(1) : Species :	11	1 2	: 13	: 14	: 15	16	17		waterfowl: days use		
Swans: Whistling Trumpeter Geese:				ga fa	Report						
Oanada Cackling Brant White-fronted Snow											nors (1
Blue Other Ducks:					anoidafu	od singe	ayerage	betamita	- ibolili	e of A galda	e) Wadi Repå
Black Gadwall Baldpate					- searchers or	pastitati	ggog g foles	W animali	funftred	M hadan	Ednis (S most)
Pintail Green-winged teal Blue-winged teal Cinnamon teal					ul Basubo i Bluada a s yahvad	a e lew euron hoor extensitati	o vadeum A saet tettos	hodentha entheen Leathean		ine titor	borT (d
Shoveler Wood Redhead Ring-necked	100	100	100	150	150	200	200	200°	13,230	66 (4)	100
Canvasback Scaup Goldeneye Bufflehead Ruddy Other					(A) maßer	Lecorded	siab lo	Vo.Somus.cv	tion:	Produc	7) Toka
Coot:					(Over)						

	(5) Total Days Use:	(6) .7) Peak Number: Total Production	SUMMARY	-1750s Cost. NR-
Swan	or Lalla	NOWING OF LAW TO	Principal feeding areas 1000 acres hardwood swamp, mar	sh and x
Duck	s 13,230	200 : 100	Principal nesting areas 800 acre hardwood swamp	
Coot	s sea: aboods: [wold.			1)
_220			Reported by James H. Roberts	i i ntowić LaW require P
	INSTR	UCTIONS (See Secs. 7531 through	7534, Wildlife Refuges Field Manual)	BEAD OF
(1)	Species	In addition to the birds lister reporting period should be added to those species of local and	ed on form, other species occurring on refuge during the ded in appropriate spaces. Special attention should be national significance.	e given
(2)	Weeks of Reporting Period:	Estimated average refuge popul	Lations.	
(3)	Estimated Waterfowl Days Use:		number of days present for each species.	
(4)	Production:	breeding areas. Brood counts	duced based on observations and actual counts on represe should be made on two or more areas aggregating 10% of naving no basis in fact should be omitted.	ntative the
(5)	Total Days Use:	A summary of data recorded und	der (3).	
(6)	Peak Number:	Maximum number of waterfowl p	resent on refuge during any census of reporting period.	
(7)	Total Production:	A summary of data recorded und	der (4).	

3-1750 Form NR-1 (Rev. March 1953)

WATERFOWL

(1) : Species : Wans: Whistling Trumpeter eese: Canada	1 :				eport	and n	A T 1 A A							
Species : wans: Whistling Trumpeter eese:	-		-	Weeks of reporting period										
wans: Whistling Trumpeter eese:			: 3		: 5			•	. 9	: 10				
Trumpeter eese:			1	1	1	1	1	1	1	1				
Trumpeter eese:														
eese:	•													
Camada														
Canada			1	200	250	1500	2000	26.00	3200	4000				
Cackling				1 200	250	200	2000	3000	3200	- 44888				
Brant				-										
White-fronted										1				
Snow		-				13	12	12	12	19				
Blue							15	15	20	20				
Other														
ucks:														
Mallard				50	100	200	200	hoo	500	800				
Black				100	300	500	500	600	700	1000				
Gadwall				100			12	20	10	10				
Baldpate														
Pintail						200	200	200	100	100				
Green-winged teal						2003	100	100	50					
Blue-winged teal			-			50	10,0	25	20	1				
Cinnamon teal						- 50			72.0					
Shoveler				1			50	25	15	-				
Wood				50	100	500	500	500	500	1500				
Redhead			-	30	111/13	344		1010						
Ring-necked				1						-				
Canvasback				-	-	+		-	-	-				
Scaup				+	-	-				-				
Goldeneye				+	-	-			-	-				
Bufflehead		-		-		-			2					
Ruddy			-	-					- 6	7				
				+	+	-			10	1				
Other Old Squaw										-				
Boded Mergenser							10	50	100	100				

WATERFOWL (Continuation Sheet)

*	(2) : (3) : (4) Weeks of reporting period :Estimated: Production											
(1)	~	: 1	. 0		: :		2	1000	waterfowl	Broods	:Estim	ate
Species	11	: 12	: 13	14	: 15 :	16	17*	18	days use	seen	tot	al
Swans:	restant	235-15-5-1	XX XX	ed by	partition of		(6 days)					
Whistling											-	
Trumpeter	The Section of the Se	* 1000000000000000000000000000000000000	20 10 12								-	
Geese:			Dales	Olyco	there .	8500	8600		471,915			
Canada	5600	6600	8244	8400	8550	0500	3000	rejor) carrys.			-	
Cackling Brant					Dr. Look Barely	FF alkho	and of a	Et links o	2	2149	Specia	
White-fronted	Witer ao		aproppi o	9030 300	nt babb	ed birm	n Follow	pertinate				-
Snow	13	30	30	20	20	20	22	agnet o	1,525		1	-
Blue	40	100	100	100	120	120	120		20270		1	-
Other	. 40	200								To	Neek	()
Ducks:					anoltalum	or saute	average	betamita	tho but	fing P	Repair	
Mallard	1000	1400	2000	1200	1400	1500	1900		87,350			
Black	1300	1500	1200	1600	1300	1800	2100		102,900	ated W	1 Ld ell	18
Gadwall	.aeio	each sne	egent for	or avso T	number	anolda	ek or pop	w erstev	412	use:	Days	
Baldpate				50	250	200	60		3,860			
Pintail	rauc 50 Lau	to 8 5018 a	servation	e de baa	200 00	300 V	300	stimated	11,600	thoris	berri	1/1
Green-winged teal	S. SERTORS	more area	no owd a	be made b	hlwods a	god coun	H aser	reeding	1,750			
Blue-winged teal	mitted.	ould be c	n fact sh	alasd o	gaivad	e Jamijal	.jejida	reeding	665			
Cinnamon teal												7
Shoveler					index (3)	bebroos	r asab io	Variamina	630	DENE	BUUT	13
Wood	1600	1600	1600	1400	1200	1200	1550		95,050			1
Redhead balance and	of report	y census	during an	990 12 I	12	Twollan	moer or	to manuface	108	Hanimi	NDS-1	10
Ring-necked		6	6	20	20		2		370		-	1
Canvasback					nder (4).	r Deproos	87 BJ 10	Armining	r impro	NEWS 1-3	DUDA	-
Scaup												
Goldeneye									107		-	
Bufflehead		9	6	200	200	150	30		8,500			
Ruddy Other Old Squar	125	200	250	200	200	130	,,,,					
	20	25	-25			25			868		1	
Hooded Merganser Coot:		-		100			4		3,174			
<u>5556</u> .	50	100	40	40	30	30 25	70		1,120			
C. Mergenser		1	Y (3/C)	I	1 91	31.7	1 /0		2000			

	(5)	(6) (7) Peak Number: Totaloduction	SUMMARY	1750a
	Total Days Use	reak Number . Total 1_3ddcc101	I I I I I I I I I I I I I I I I I I I	ers. March 1958)
Swan	S	:	Principal feeding areas	tesa buc dites eblo
Gees	e 478.712	: 0'8600 : SENTMOM	marshes, Little and Deep Crocks.	allowers 3DUE
Duck	s <u>315.951</u>	: 6056 :	Principal nesting areas	
Coot	s to a 3 174 d Lwol o	(# 700 d)	Reported by All R. Cunningham, Kafu	BELLIV BENW
	INS	TRUCTIONS (See Secs. 7531 throug	gh 7534, Wildlife Refuges Field Manual)	Canada da
(1)	Species	reporting period should be a to those species of local an	sted on form, other species occurring on radded in appropriate spaces. Special attend national significance.	efuge during the
(2)	Weeks of			
(-/	Reporting Period:	Estimated average refuge population	pulations.	
(3)	Estimated Waterfo	wl I	Stil Bool eggs over	
	Days Use:	Average weekly populations :	x number of days present for each species.	
(4)	Production:	breeding areas. Brood coun	roduced based on observations and actual c ts should be made on two or more areas agg s having no basis in fact should be omitte	regating 10% of the
(5)	Total Days Use:	A summary of data recorded	under (3).	i slaveik
(6)	Peak Number:	Maximum number of waterfowl	present on refuge during any census of re	porting period.
(7)	Total Production:	A summary of data recorded	under (4).	
		0	100 100 E	
			the same of the sa	

DA.

MIGRATORY BIRDS

(Other than Waterfowl)

to April

1965

Refuge Presquile NWR Months of January

	(1) Species	First Seen		(3) Peak Concentration			(4) Seen		(5) Production		(6) Total
	Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I.	Water and Marsh Birds:			TA' F	yes shi nig	eors (Se Fds (Fal	cumbiforms	es) s. Strigit	ormes and	Dredares	18243
	Great Blue Heron	. 17	1/3	21	4/2	20	4/30	None obs	erved	as and Gi	20
	American Egret	9 00	1/3	12	4/2	2	4/30	ing period	should b	e added : and Natio	10
	Snowy Egret	None	observed.	es four	d in the A.s "coagnill	0.U. Che	Mist, 1	OR Edicio	m, said lift to blie u	or group	in A.O.U.
	Little Blue Heron	It.	11		DE TRUCATIONS	(-866	Ree. 7530	med by	Re-fugges	Held Ma	mal)
	Little Green Heron	n	11								-
	Iouisiana Heron	п	11							. *	
II.	Shorebirds, Gulls, and Terns:										
	Ring Billed Gull	100	1/3	500	4/7	200	4/30	None obs	erved	-	300
	Herring Gull	10	1/3	50	4/7	20	4/30	11	ti		50
			· · · · · · · · · · · · · · · · · · ·		127		-		(5)		(9)

	(1)	(2)	(3)	(4)	(5)	(6)
III.	Doves and Pigeons: Mourning dove White-winged dove					
麦						
IV.	Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie		- 3c = 13 - 2m = 1/3			300
	Raven Crow					
		it yii				
	(1) Species:	order. Avoid genera form, other species priate spaces. Species grificance. Group	I terms as "seagull occurring on refuge ial attention shoul s: I. Water and Ma II. Shorebirds,	IS (See Sec. 7532 A.O.U. Checklist, 1 L", "term", etc. I e during the report Ld be given to thos arsh Birds (Gaviifo Gulls and Terns (C		oup in A.O.U. isted on d in appro- tional
			III. Doves and Pi IV. Predaceous F		s, Strigiformes and preda	
	(2) First Seen:	The first magration	record for the spec	eies for the report	Passerifor ing period.	,
	(3) Peak Numbers:	Estimated number and	inclusive dates wh	nen peak population	of the species occurred.	
	(4) Last Seen:	The last refuge reco	rd for the species	during the season	concerned.	
	(5) Production:	Estimated number of	young produced base		and actual counts.	1963
	(6) Total:	Estimated species da reporting period	ys use (average por	pulation X no. days	present) of refuge during	ng the

(DASI)

Refuge presquite MATIONAL Wildlife

MIGRATORY BIRDS (Other than Waterfowl)

Months of May

to August

1965

(E) (1) parrous 1	2			3) inded best		4)	a aby and	(5)		(6)
Species	First	Seen	Peak Co	ncentration Inclusive	Last	Seen	Number	Production Total #	Total	Total Estimated
Common Name	Number	Date	Number	Dates	Number	Date	Colonies	Nests	Young	Use
I. Water and Marsh Birds:	shimated	1.51 marghests - 10	and the state of	The Market M	er bede	mornil set	or or the	10003		46
G. Blue Heron	10	5/1	47	8/20	17	8/30	None ob	served.	861,101	2,520
American Egret	· 16	5/1	29	8/20	21	8/30	None ob	served.	g harque	2,520
Little Green Heron	1	8/20	1	8/20	1	8/20	None ob	served.	waa uuq	252
	age per elle	des. Bp	ecial atte	ntion shou	g pe Rya	er-po co	DES LININGE	of local	Mari Nes	Tonej
	rder, An	org Konso	Mel semis	as "seagul g on refug	", "term	y elect	an anditor	or co	TAP I	istan on
(T) 10-100:	me the co	MALONE DW	ass up 201	INSTRUCTION	S (See	Sec. To	SE, WILLIA		Jenni I	(Enthall)
						1 Re	hoters In			
I. Shorebirds, Gulls,	1	200	5	Shira		8/20		his passa.	Earl's	e3e 3
and Terns:	123	NT.	50	1 1/2	TF	8/30		ditti oneas	lag*	2,500
Ring Billed Gull	100	5/1	200	7/17	200	8/30	None ob	served.		25,200
Herring Gull	50	5/1	50	5/1	9	8/30	None ob	served.		6,300
MATTHEW DAY										
back have										
IV: Freder jour Marks										
	520	31-	100	An	Silia Silia	-Augus		700		250*030
Martine vitages form		1	1		1		1	1		
				(over)						

III. Doves and Pigeons: Mourning dove White-winged dove 250 5/1 2000 6/5 200 8/30 100 300 126,000 2IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow 15 15 17/17 10 8/30 Reported by	(1)		(2)		(3)		(4)	(5)	(6)
Golden eagle Duck hawk Horned owl Magpie Raven Crow 15 5/1 20 6/1 10 8/30 Inne observed. 2,520 252 Reported by	Mourning dove	250	5/1	2000	6/5	200	8/30	100 300	126,000
Raven Crow 15 5/1 20 6/1 10 8/30 Rape observed. 2.520 252 Rald Fagle 1 5/1 2 7/17 1 Reported by	Golden eagle Duck hawk Horned owl								
Bald Fagle 15 5/1 20 6/1 7/17 1 8/30 Mone observed. 2.520 252	Raven	- 3v	130	1 30	3/15	à	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	None separate.	300 -
Reported by	Crow	4470 (6	3 3	SLO	2/37	200	1 1/34	your population;	3,20
	Bald Fagle	15	5/1		6/1 7/17		8/30		2,520 252
		1	1	1	-	1	Ren	orted by	1
INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)			1		INSTRUCT	ONS (Se			Manual)
(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.	(1) Species:	Use the c	orrect na	ames as fo		,			

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "term", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gavilformes to Ciconiiformes and Gruilformes)

II. Shorebirds, Gulls and Terms (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first magration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

5) Production: Estimated number of young produced based on observations and actual counts.

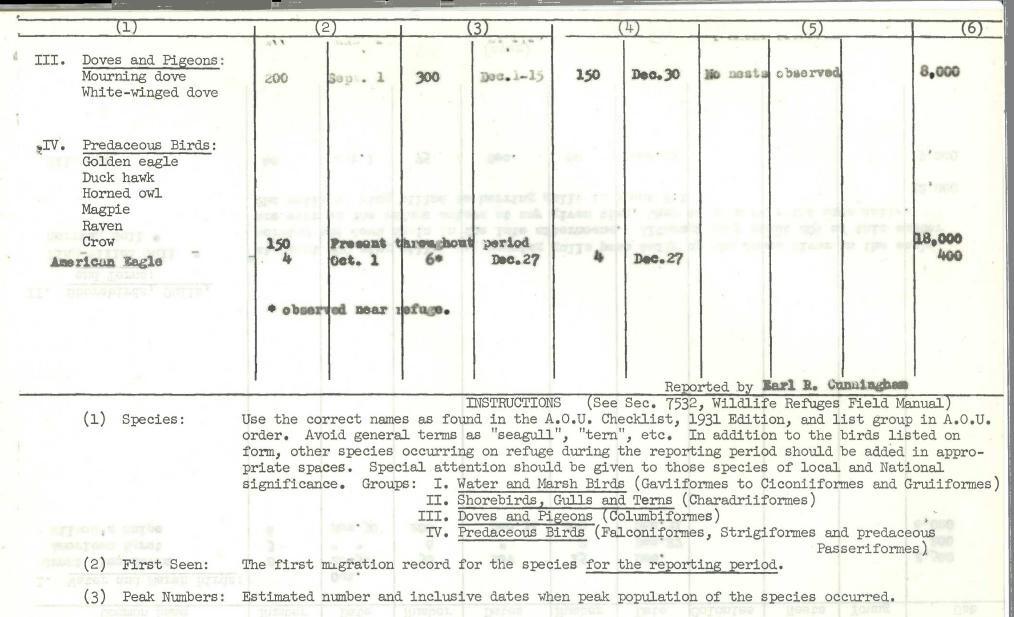
(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

MIGRATORY BIRDS (Other than Waterfowl)

Months of September

Refuge

(1) Species	First	Seen	Peak Co	3) ncentration		(4) t Seen		(5) Production		(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total #	Total Young	Estimate Use
Water and Marsh Birds: Great Blue Heron American Egret Wilson's Snipe	8 3 6	Oct. 20-30 Nov.30	30 6 200	Nov Dec. 31	15 2 200	Dec. Dec.27 Dec.31	Charedrid nes)	formes ar formes ar Pas id.	g buyta	2,500 200 6,000
	orth cour educe spe significan	ess. Spe ces. Spe ces. Grou	occarri cial att	ag on refug ention shou water and M	rep grad g. pe del gradus	the regor an pe the	cing perio	id should s of local Heomilfor	be added and Wat mes and	in appro- lonal Fruitforms
	as the co	org luber	ey possili en ca 30	re enegot	S (See	Reg. 759 Sec. 759 edklist, ", stc.	orted ti 2, Villali 1931 Base In sadifize	rear 1. • • Le lle lages Long, read l mi to the	Pieli N int grou birds li	mual) p in A.O.U sted on
Shorebirds, Gulls, and Terns:	At least	800 ring	billed	and herring	gulls pe	se daily	up the Ja	es River	in the e	arly.
Herring Gull • Wethre Howned Day Dack BRAN	morning are ever	and down on the r	again in ofug o wa	the late at ters at any to herring	termoons given ti	althou	ch only a	eut 20% o	f this n	umber
Killdeer	40	Sept.1	75	Dec.	60	Dec. 27				7,000
	1986		300	Dank 3.3	150	200,30	*	2 1 pma 1,439		9*00Ş
				(over)						



(4) Last Seen: The last refuge record for the species during the season concerned.

Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge <u>during the reporting period</u>.

3-1750b Form NR-1B (Rev. Nov. 1957)

UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Reported by	James H. Ro	berts	Title	Refuge Man	azer	
1900 PHO 10			nbour ex			1833B
(1)	(2			(3)	(4)	(5)
Area or Unit	Habi			20000	Breeding	
Designation	Туре	Acreage	20 1 1	Use-days	Population	Production
	Crops	250	Ducks	756,343	50	100
	Upland	70	Geese	982,184		
	Marsh	250	Swans	ra and between		
	Water	1629	Coots	4.704		
	Total	2199	Total	n Blands		
o deligen aus	Crops	oal descr	Ducks	accompan		
	Upland	89 10 1 90	Geese	THE TENSO		
	Marsh	land wits	Swans	HORS TOT		
	Water	S LITT BLANCE	Coots	rodar on		
	Total		Total	SHOLU		
uda auch as us	Crops	sull fue j	Ducks	Oroga Lin	:debideE	(9.)
	Upland	moder Lig	Geese	meng bas		
	Marsh	Lis al i	Swans	egenth wan		
	Water	of the commence	Coots	ini svods		
	Total	Wisterd	Total	mergence		
Tue ser ette	Crops	UU Bala ma	Ducks	xe datam		
	Upland	surt meda	Geese	including		
	Marsh	vo Lentra	Swans	ta v.Lev.lt		
	Water	tacludin	Coots	vegetatio		
	Total	category	Total	ij ni bne		
	Crops	ranka way	Ducks	were't noch		
	Upland	nem melne	Geese	i dell'ingres		
	Marsh	ose han	Swans	in seelat		
	Water	state wal-	Coots	nemarió		
	Total	e jeninetin	Total	surkas fura		
	Crops	TA DOM DE	Ducks	snould be		
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
mentau orfolosus	Total	ne met femel	Total	areah-pall	www.afaa-11	(e)
	Crops	use yd ne	Ducks	of talugog		1
	Upland	1 11 (11)	Geese	James Carl		
	Marsh		Swans			
	Water .		Coots	-	Strong	(= 1)
	Total		Total	Mark de la constant	mondoningo t	
islan			- (over	Taugadas in		

(5) Frudacedon: Estimated total mailur

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) Area or Unit: A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.
- (2)Habitat: Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.
- (4) Breeding
 Population: An estimate of the total breeding population of each category of birds for each area or unit.
- (5) Production: Estimated total number of young raised to flight age.

UPLAND GAME BIRDS

Refuge Presquile NWR Months of January to April , 19 65

Form NH-2 - UPLAND GAME BIRDS.*

Species	-	(2) Density	favener	You Produ	ng	(4) Sex Ratio	R	emova.		(6) Total	esu EggA	(7) Remarks	(1)
Common Name	58	Cover types, total acreage of habitat	Acres	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Restocking	For Research	Estimated number using Refuge	sp	tinent information ecifically request tintroductions h	sted.
Bobwhite Quail	e rt e ual	Field borders and swamp edge. (300 acres)	bottom Wildli ted sho	land, ted in their	ture Lis Tes	type symbols	reve dard e po	Star	ardwo eto, used	s prairie, 7 should be	Swall Eval No.	ar nama lotion	
Wild Turkey	A	Entire island (1329 acres)	er' Reuss	been be	icat	1 fema	ease	is To	SOTS	elques lo	inte adja	rmittent, shared cent areas.	
		escuce (ausoa boa	•			oitat.	g ha	ribee	td av	epresentati	1 11 1		
		c. Include data on					.9	idali	ave 1	resident	ida e	OITAG KAZ	
		boltsq drogs										REMOVALES	(3)
8	SODS	eriod. This may during certain ses	sport p	z edi edi od	ering ug in	ibe reluge di itarria econ	ing us t	er w de pl	imun Lêd ji	mated total ude resider	jag onl	ATCATCA	(6)
		ed in survey. Also ted,	reques	llasi	a no. lipe	falupop anim astion not s	eter nfor	oi Jne		cate methor ude other		* 是从只在竹道树	(17)
						been ed binc	is b	71970	boż	leg ent of (ldso	elqqe enguloo ylo	0 #
								¥			-		
			,										

Form	NR-2 -	UPLAND	GAME	BIRDS.*
------	--------	--------	------	---------

(1) SPECIES: Use correct common nam	0.
-------------------------------------	----

(2) DENSITY: Applies particularly to those species considered in removal programs (public munts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series Nc. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

- YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- REMOVALS: Indicate total number in each category removed during the report period.
- Estimated total number using the refuge during the report period. This may (6) TOTAL: include resident birds plus those migrating into the refuge during certain seasons.
- Indicate method used to determine population and area covered in survey. Also (7) REMARKS: include other pertinent information not specifically requested.

^{*} Only columns applicable to the period covered should be used.

UPLAND GAME BIRDS

Refuge Presquile NWR Months of May to August , 1965

Form MR-2 - UPLAND GAME BIRDS.*

(1) Species	(2) Density		(4) Sex Ratio	(5) Removals	(6) Total	06U (7)2ATDARR (1) Remarks
Common Name	Acre Cover types, total per acreage of habitat Bir	s vods	percentage		Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
i dra B Esse	Field border and 10 swamp edge. (300 acres) Entire Island (1329) acres.	9 15	l~l ∪2 Male 1 Female	aver abombra brightald bri	p, upland less prairie, y should be reations at of sofple maked numbe	Turkey population intermittent, and shared with adjacent areas.
	, etc. Include data oz	ey, phoasanta	to wild turn	lies primarily f avsilable.		
	he report period,	guitab bevo	category ret	number in each	cate total	that : SIANNAR (2)
*8008	ort pariod. This may often con					
	oveded in survey. Also quebed,	on and area o ecifically re	mine populati sation not an	neset to deter	cate method ude other	(7) REMARKS: Indi
			bear ed bird	ds bersvo bei	to the per	* Only columns applicable

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1)	SPECIES:	Use	correct	common	name.	
-----	----------	-----	---------	--------	-------	--

Janena of

(2) DENSITY:

Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

^{*} Only columns applicable to the period covered should be used.

UPLAND GAME BIRDS

Refuge to December 1965

<pre></pre>	(2) Density		You Produ	ng ced	(4) Sex Ratio		(5) emoval	Ls	(6) Total	eeu Lega	(7) TIME Remarks	
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Restocking	For Research	Estimated number using Refuge	spe	tinent information scifically reques t introductions h	ted.
ild Turkey	rik bezu bodfed yeva 320 acres - sir	100 f	obser obser	the List in the Li		eved basb og e og e	Star wher nts c	ardwt etc. Heed d cou		ETES Wo.		
	agricultural fields plus bos swamp edge.	enoija∀	obser	E C.					mated number epresentati		TOUNG PROBUCED:	(3)
	e. Include data em	nts; et	seasic	iey ,	to wild tur		ening Habi	- 2	column app		COTTAN X38	(A)
	bolied Jrode	r old g	n.Fiirb	peadl	category re	dose	nė i	dawn	Isloi elso	FAIL	Michigan.	(2)
<u></u> \$10, % €1	erlod. This may during terbain ses										SATOT	(6)
	ed in survey. Alac ted.				mine populat			used ertii			HEARRES:	(7)
					beas ed blac	ila b	risvo:	bor	eq eds os	lcabl	mly columns appl) *
							, t		•			

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited

numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series Nc. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

^{*} Only columns applicable to the period covered should be used.

Refuge_____

Calendar Year 1965

(1) Species	(2) Density	(3) Young Produced		(4) ova:	uata ls	I		(5) sses	In	(6) troductions	(7) Estimat Total Re Populat	fuge	(8) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	c-tallad : their of	no							lbal	eriect com essary to 19270021 u ssed in ac ment from	CIKŚ: New (Uństel		
mples: roob	760 acres hardwood swamp, 250 acres tidal marsh, 300 acres agricultural 300 acres based ad i	to obscruiture led in Wi	h a grí lis	mue ng a ols sub as.	so rti ymb res	t not reve ype s Figu	e ds ds	oi bow tall idi	e area format d hare Star e post sentar	n the distance of the correction of the correcti	jes occur i the desire se swamp, o prairie, d be used	ned200 dein urge serg works	200	lm:27
	ge. ming the year.	d on refu										NG PRODUCED		
	tes indicate total losses in . (ch stock was secured.			-		yse	tela	gni	anp A	roga	each ca	SES:		
	the refuge at period of its	31.	, 0	f D	18	lso	4 b	e an	ndand	ab	greates	AL REFUGE VULATION:		
rom	tach species as determined t		Is	VON	SI D	RUOTE		0 8	torion	TORY	o hield	RATIO:	(8) SE	

Remarks: At least 125 animals have been counted simultaneously in 300 acres of agricultural crops. It is probable that more than 75 animals were present at the time on the other 1000 acres. The 200 figure is probably conservative.

17060

Reported by

Rayl R. Chinningham

Refuge presentle

	(7)		IN	STRUCTIONS			
(8)			(5)	(4)	(3)		(1)
	orm NR-3 - BIG GAME	Introduction	Losses		Young	Density	Species
	Population				Produced		
						r, white-tailed deer. It	
- 1	unnec	essary to indic	ate sub-spec	les such as n	orthern or Lo	uisiana white-tailed deer.	
	(2) DENSITY: Detai	led data may be	omitted for	species occu	rring in limi	ted numbers. Density to h	20
1	expre	ssed in acres p	er animal by	cover types.	This inform	ation is to be prefaced by	у а
3						s in each cover type found	
						repeated except as signifi	
VS:014						uld be detailed enough to	
1						the general picture. Exa	A STATE
						, bottomland hardwoods, shife Management Series No.	
						e based on actual observat	
				-		used and size of sample an	
	or ar	eas should be i	ndicated und	er Remarks.			
	(3) YOUNG PRODUCED:	Estimated tot	al number of	young produc	ed on refuge.		
	(4) REMOVALS:	Indicate tota	1 number in	each category	removed duri	ng the year.	
	(4) Idilovido.	indicate tota	I Hamber III	cucii curegory	Tomoved darr	ng ene year.	
	(5) LOSSES:	On the basis	of known rec	ords or relia	ble estimates	indicate total losses in	
1		each category	during the	year.			
	(6)						
	(6) INTRODUCTIONS:	Indicate the	number and re	eruge or agen	cy from which	stock was secured.	*
	(7) TOTAL REFUGE						
	POPULATION:	Give the esti	mated popula	tion of each	species on th	e refuge at period of its	
1		greatest abun					
24	(8) SEX RATIO:					h species as determined fr	com
ald	admin al II , accorn I	field observa	tions or thr	ough removals	to balaton a	leset 125 saimals have be	*
						i 75 animale were proceed	The second of the second of the

Reported by (22

mandardenach . If feedl

Presquile NWR Refuge

Year ending April 30, 1965

(1) Species	(2) Density	portance anll rod tered to	mi z n	Rem	(3) ovale	all s oyote ach s	no s nk, c	ab shuls m ,noon obselu	lsposi	(4) tion of	Jure	- 1	ew prec	(5)
	! skunk, spotted skunk white-istled jackrab	egh 18	le!	magi	- 8	1.8:EE 12:	maco	tos Share	Trap	ping	efuge 1pped	ted	e (r	Total Popula-
dayoff to di mate Animals	Cover Types & Total Acreage of Habitat	Acres Per Animal	230	386	Predator Control	For Restocking	For Re-	Permit Number	Trappers	Refuge	Total Refuge Fure Shipped	Turs Donated	Fura Destroyed	tion
	nn 1,329 II ai gairteac										1.3	TIEM	g 15	260
Muskrat eds of bests a	Marsh, river & creek bank. (600 acres)	po 6 ins	ten ype	de a	уу Б со	face n es	re pr	s to red	oli mun				4	100
Stripped skunk	Fields and borders. (300 acres)	und5 asg	08	or t	nq u	type	cove	to sets berissb	the the					60
Grey Squirrel	Hardwood swamp.	e, eol. hould be	1711 8 T	TQ S	gras	a jm	ods, iagem	l bardwo	led Wil			11		80
	Fields, borders and river banks. (300 acres)				50*	ESATI	e		nes					50
Red Fox Ismina viors	1,329 viel de solen	133	n	o re	lova.	Selo	it , m	no trapp	ing		: 2.1	AVONS	(3) E	10
Cottontail Rabbit Beaver	Fields & borders (300 Acres) Tidal Marsh and	3 (ava 11m 14 25 he	rsq Iq n	edi Fe	mova	erui Is ^{re}	spped	nt-erade	no :	UV TO	noiti	1 SP01	I (#)	100 4
-salique lo sau	hardwood swamp (1000) Predator Animal Hunter	acres)	87.	eq. l	nof;	thnos	Total	sonnel.	req					

*Ground hogs removed by refuge personnel from field terraces, road banks etc. by use of Service REMARKS: Gas cartridge. Designer select does to notally of later betanism : WOITAIUTOT LATER (5)

Indicate inventory method(s) used, size of sample area(s), introductions, and eny other pertinent information not specifically requested.

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e. muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Issol

molt

Popula-

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

Refure Presquile NWH

(2) DENSITY:

Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headingslisted.

(4) DISPOSITION OF FUR:

On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS:

Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

RIMARKS

Remarks

Refuge Presquile

Year 19. 65

Botulism	Lead Poisoning or other Disease NONE
Period of outbreak	Kind of disease
Period of heaviest losses	Species affected
Losses: Actual Count Estimated (a) Waterfowl (b) Shorebirds (c) Other	Number Affected Species Actual Count Estimated
Number Hospitalized No. Recovered % Recovered (a) Waterfowl (b) Shorebirds (c) Other Areas affected (location and approximate acreage)	Number Recovered Number lost Source of infection Water conditions
Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.	Food conditions
Condition of vegetation and invertebrate life	Remarks

(Rev. 4/63)

PUBLIC RELATIONS

(See Instructions on Reverse Side)

V.	isits a. Hunting		b. Fishin	g 1,500	с.	Miscellaneous	05	d. TO	TAL VISITS	1,705	
Н	unting (on refuge 1	lands)		a rational	2	Refuge Participati	Lon (grou			2.4	
	ТУРЕ	HUNTERS	ACRES	MANAGED BY		THE SHE WEST	30112 143 44 -4 5		Refuge		Refuse
	Waterfowl	None.	el Lateado	edal sas vo	27 BY	TYPE OF ORGANIZAT	TION	NO. OF	NUMBER IN GROUPS	NO. Of GROUPS	OROUPS
	Upland Game	No. 10			(5.0 Your	Sportsmen Clubs	of the same of the	i i i i i i i i i i i i i i i i i i i	he and term	i.	30
	Big Game	Naze	Toller to	redon:	3% 2304. 35	Bird and Garden Clu	ıbs	helita	asilgma b	15	
	Other	io no	ted group-	A'180		Schools	AU TE S	HEET OF	bessed ada	sold	
	Number of perman	nent blinds	Ram		-0.1	Service Clubs		Blanch C		MA SEL	Item
	Man-days of bow		permatus, c	None	ate es	Youth Groups		toper .	175	1 M	
	Estimated man-da	hunting incl	uded above		.go	Youth Groups Professional-Scient Religious Groups		DE cre	175 2		
· F	Estimated man-da	hunting incl	uded above	djacent to	ega ega dib be	Professional-Scient	tific	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	175 3 13		?
. F	Estimated man-da	hunting inclarys of hunting	uded above	djacent to	es esta essa esta be a sid do a la	Professional-Scient Religious Groups	tific		175 2 13		? 35
· F	refuge	hunting inclars of hunting to fishing on AREA	uded above ng on lands a	djacent to	20 10 10 10 10 10 10 10 10 10 10 10 10 10	Professional-Scient Religious Groups State or Federal Go	tific	TOT TOT	175 2 13	Los Rec	medi .
10	refuge	hunting incl ays of hunting to fishing on AREA	uded above ng on lands a	djacent to	30 18 -10 18 -10 18	Professional-Scient Religious Groups State or Federal Go Other Other	ovt.	Radio	13 23 Vilyaming +moliaevily	165	35 NUMBER
10	refuge	hunting incl ays of huntin to fishing on AREA	ag on lands and refuge land	MILES	20 10 10 10 10 10 10 10 10 10 10 10 10 10	Professional-Scient Religious Groups State or Federal Go Other Other Activities TYPE	ovt.	Radio	TYPE Presentati	165	modil .

INSTRUCTIONS

Item 1: Total of a, b, and c, equal d.

"Visit" - definition. Any person who is on refuge lands or waters during a day or part thereof for the purpose of: hunting, fishing, bird-watching, recreation, business or economic use, official visit, or similar interest. INCLUDE - those who stop within the refuge while traveling on a public highway because of an interest in the area. EXCLUDE - persons engaged in oil or other industry not directly related to the refuge, persons using refuge as most direct route or principal avenue of traffic, and those boating on navigable rivers or the Intercoastal Canal, unless they stop to observe wildlife on the refuge.

Computing visits. Where actual counts are impractical, "sampling" is used with midweek and weekend samples varied by season or weather. A conversion factor of 3.5 (of passengers per car) is used when accurate figures are not available. Each refuge will develop a conversion factor for boats based on range of usage. Count a camper once for each 24-hour period or fraction thereof.

Item la: Acres - of refuge open for each type of hunting.

Managed hunts require check in and out of hunters, issuance of permits, or assignment of blinds.

Other - INCLUDE crow, fox, and similar hunting.

Lands adjacent to refuge. Normally considered within 1 mile or less of boundary, unless established sampling procedures cover a wider area. For big game hunting, the distance may be greater.

- Item lb: Acres of streams open to fishing, if practical; otherwise just miles open. Information on "shores" is primarily for coastal fishing.
- Item lc: Recreation. INCLUDE photography, observing wildlife, picnicking, swimming, boating, camping, visitor center use, tours, etc. TOTAL Recreation, Official, and Economic Use visits under Item 1.

Industrial. INCLUDE persons engaged in industry, i.e., oil industry or factories. EXCLUDE these from Item 1.

- Item 2: INCLUDE the "On Refuge" groups in Items lc and 1. In "Off Refuge" column include only those group meetings in which refuge employees actually participate. EXCLUDE these from Items lc and 1.
- Item 3: Exhibits INCLUDE displays, fairs, parades, and exhibits OFF the refuge; EXCLUDE those ON.

NONAGRICULTURAL	COLLECTIONS,	RECEIPTS,	AND	PLANTINGS

Refuge	120500001	Year	19	65
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*	(See	(Seeds, rootstocks, trees, shrubs)						Plantings (Marsh - Aquatic - Upland)						
Species	Amount (Lbs., bus., etc.)	(2) C or R	Date	Method or Source	Cost	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shorelins)	Amount and Nature of Propagules	Date	Survival	Cause of Loss	
										•				

(1) Report agronomic farm crops on Form NR-8 (2) C = Collections and R = Receipts (3) Use "S" to denote surplus	Remarks: Nothing to report.
Total acreage planted: Marsh and aquatic Hedgerows, cover patches Food strips, food patches Forest plantings	

76148

Fish and Wildlife Service Branch of Wildlife Refuges

1965

CULTIVATED CROPS - HAYING - GRAZING

Cultivated	The state of the s	ittee's Harvested		rnment's :		Return rvested	Total	Green M. Cover a	anure, nd Water-	
Grops Grown	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons	Acreage Planted	fowl Browsing Crops Type and Kind		Total Acreage
unk's G-72 Hybrid cor apenese Buckwheat enece wheat common Ryegrass adino cloveraky.31 fe	20 001362 30 001363 30 00 001	aped cucie it brantaq quark and garante an	15*	300 bu	55	4,000 bu	70 mass statement of best and best for	promse	browse overseeded overseeded tefescue	70 18 80 25 35 108
		THE RESERVE OF THE PARTY OF THE				20 00 10 0				1 52
No. of Permittees: A	Agricultur	al Operation	ns	0	Haying	Operations	0	Grazin	g Operations	0
Hay - Improved	Agricultur Tons Harvested	al Operation	Cash Reven	8-5-3 m	Haying GRAZING	Num		Grazin	Cash Revenue	O
Hay - Improved	Tons	e die Fall	Cash	ue	1, 8 1	Num	ber		Cash	
Hay - Improved (Specify Kind)	Tons	e die Fall	Cash	ue	GRAZING	Num Ani	ber		Cash	
Hay - Improved (Specify Kind)	Tons	e die Fall	Cash	ue 1. 2.	GRAZING Cattle Other	Num Anii None	ber	AUM'S	Cash Revenue	

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under <u>Cultivated Crops</u>, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

REFUGE GRAIN REPORT

(1)	(2) On Hand	(3) Received	(4)		GRAIN D	(5) DISPOSED OF		(6) On Hand	Propos	(7) ED OR SUITAB	LE USE*
Variety*	BEGINNING OF PERIOD	DURING PERIOD	TOTAL	Transferred	Seeded	Fed	Total	END OF PERIOD	Seed	Feed	Surplus
Seneca Wheat Common Ryegrass Corn Tapanese Buckwheat Ty 31-fescue Ladino Clover	0 0 195 ba 0 0	472 bu	305 bu 1250 lbs 667 bu 1200 lbs 500 lbs 100 lbs	hudhoseg	90 bu 250 lbs 12 bu 200 lbs 500 lbs 100 lbs	65 ba *	305 bu 1250 lbs 412 bu 1200 lbs 500 lbs 100 lbs	0 0 255 bu 0 0		255 ba	
	(2) 1/4 (2) (2) (3) (4) (4) (4) (4)	n et malaya n e lossa ng n a presposa ne i i for eg	destruction	ol"	thes of Kr		n ecleme 6	Indical (*)			
	(3) 1 - 1800 -, 00 -, 12, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13		and also the state of the state		mecosaury produs; no fran all a	Mere fist in conside natis and ources, su	ng as coen, ring transfe other seeds v on as transf	where, son r of reest su rig hadistride ar, ahare ere			
	the by	og carr se top galace group to cre a compression onemession	Se the mitter gradient of gradient action	-SO TO, SO granuches, andy and religious way	litted, skilling	is tint of wheat s	ntents (en f arn, yeltav d adap whant,	ary — (0 tb., s. peas — 50 r. t by 0.8 bbs ent corn, squ press millet			

(8) Indicate shipping or collection points Ropevell, Virginia

(9) Grain is stored at Refuse grainery

(10) Remarks • used for bait in dove and waterfowl banding operations.

^{*}See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

3-1759 Form NR-9 (April 1946)

COLL CONS AND RECEIPTS OF PLANTING CK (Seeds, rootstocks, trees, shrubs)

Year	10	20
rear	エラ	05

Refuge

9			llections		Rece	ipts		
Species	Amount	Date or Period of Collection	Method	Unit Cost	Amount	Source	Total Amounts on Hand	Amount Surplus
Hone								
· ·								
	7							
							×	
		-						
		848						
					+			

3-1761 Form NR-11 (2/46)

TIMBER REMOVAL

Refuge Presquile	Year	195	65
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Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
MORE								

Total acreage cut over	Total Income
No. of units removed B. F. Cords. Ties.	

Refuge

ANNUAL REPORT OF PERSTICIDE APPLICATION

Proposal Number Reporting Year

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.					43	1065	
Pate(s) of List of Application Target Pes	Of Aras	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1) (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
May 25- June 1 Jimson Weed and Johnson Gra	Refuge fields #2 and 5	40	Atrazine	135 lbs. (80%)	2.7 lbs A.E./A	water 10 gals/a	Commerci-

^{10.} Summary of results (continue on reverse side, if necessary) plans were to apply Atrasine with liquid nitrogen prior to planting corn.

Drought conditions delayed planting of corn - hence delay of Atrasine. It was ultimately appled after corn was up and growing. Application was made by commercial vendor as side dressing simultaneously with nitrogen application, but with different carrier from separ to tanks. Control of target posts was 90% complete - cost was \$9.00/acre.